

## CLAIMS

What is claimed is:

1     1.     A method of provisioning a circuit comprising the steps of:  
2             provisioning an Ethernet port facility, including determining members of  
3     a Link Capacity Adjustment Scheme Virtual Concatenation Group before virtual  
4     tributary or synchronous transport signal cross connections are provisioned and  
5     before Synchronous Optical Network or Synchronous Digital Hierarchy cross-  
6     connections are provisioned;  
7             provisioning virtual tributary or synchronous transport signal cross  
8     connections; and  
9             provisioning Synchronous Optical Network or Synchronous Digital  
10    Hierarchy cross-connections.

1     2.     The method of claim 1, wherein the step of provisioning the Ethernet  
2     port facility comprises the step of  
3             provisioning the Ethernet port facility so that Virtual Concatenation  
4     Group members that are not associated with a virtual tributary or synchronous  
5     transport signal cross connection return an Link Capacity Adjustment Scheme  
6     sink status of FAIL and Virtual Concatenation Group members that are not

7 associated with a virtual tributary or synchronous transport signal cross  
8 connection enter an operational Link Capacity Adjustment Scheme source state  
9 of "Do Not Use".

1 3. The method of claim 2, wherein the method further comprises the step  
2 of:

3 using Link Capacity Adjustment Scheme source and sink adaptation  
4 functions, automatically activating the Virtual Concatenation Group members.

1 4. The method of claim 3, wherein the step of using Link Capacity  
2 Adjustment Scheme source and sink adaptation functions, automatically  
3 activating the Virtual Concatenation Group members comprises the step of:

4 causing the Virtual Concatenation Group members to have an Link  
5 Capacity Adjustment Scheme sink status of OK and an operational Link  
6 Capacity Adjustment Scheme source state of NORM or EOS.

1 5. A system for provisioning a circuit comprising:

2 means for provisioning an Ethernet port facility, including determining  
3 members of a Link Capacity Adjustment Scheme Virtual Concatenation Group

4 before virtual tributary or synchronous transport signal cross connections are  
5 provisioned and before Synchronous Optical Network or Synchronous Digital  
6 Hierarchy cross-connections are provisioned;

7 means for provisioning virtual tributary or synchronous transport signal  
8 cross connections; and

9 means for provisioning Synchronous Optical Network or Synchronous  
10 Digital Hierarchy cross-connections.

1 6. The system of claim 5, wherein the step of provisioning the Ethernet port  
2 facility comprises the step of

3 means for provisioning the Ethernet port facility so that Virtual  
4 Concatenation Group members that are not associated with a virtual tributary or  
5 synchronous transport signal cross connection return an Link Capacity  
6 Adjustment Scheme sink status of FAIL and Virtual Concatenation Group  
7 members that are not associated with a virtual tributary or synchronous transport  
8 signal cross connection enter an operational Link Capacity Adjustment Scheme  
9 source state of "Do Not Use".

1 7. The system of claim 6, wherein the method further comprises the step  
2 of:

3 means for using Link Capacity Adjustment Scheme source and sink  
4 adaptation functions, automatically activating the Virtual Concatenation Group  
5 members.

1 8. The system of claim 7, wherein the step of using Link Capacity  
2 Adjustment Scheme source and sink adaptation functions, automatically  
3 activating the Virtual Concatenation Group members comprises the step of:

4 means for causing the Virtual Concatenation Group members to have an  
5 Link Capacity Adjustment Scheme sink status of OK and an operational Link  
6 Capacity Adjustment Scheme source state of NORM or EOS.